Amendments to the Claims:

This listing of Claims will replace all prior versions, and listings, of claims in the application where added material is shown in underlined type, deleted material is shown in strikeout type:

Listing of Claims:

1. (Currently amended) A process for converting carbonaceous feedstocks into energy without the production of unwanted greenhouse gas emissions comprising:
(a) converting a carbonaceous feedstock selected from the group consisting of coal, hydrocarbon oil, natural gas, petroleum coke, oil shale, carbonaceous-containing waste oil, carbonaceous-containing medical waste, carbonaceous-containing military waste, carbonaceous-containing industrial waste, carbonaceous-containing medical waste, carbonaceous-containing sewage sludge and municipal solid waste, carbonaceous-containing agricultural waste, carbonaceous-containing biomass, biological and biochemical waste, and mixtures thereof, and a greenhouse gas stream in a gasification unit to synthesis gas comprising carbon monoxide and hydrogen, said gasification unit is a non-catalytic high temperature, gas-phase, indirectly heated kiln having an inlet means, a gas outlet means, and a solids outlet between the inlet means and the gas outlet means operating at a temperature gradient along the length of the kiln of about 200° to about 1600°C (400-2900°F) and at conditions to achieve a gas exit temperature of from at least 700° to about 1600°C (1300-2900°F);
(b) electrochemically oxidizing at least a portion of said synthesis gas from said gasification unit in a first half-cell of a fuel cell (anode) to a first half-cell exit gas comprising carbon dioxide and water;
(c) recovering the carbon dioxide from said first half-cell exit gas to serve as at least 20 % of said greenhouse gas stream in step (a); and
(d) electrochemically reducing an oxygen-containing gas in a second half-cell of said fuel cell (cathode) completing the circuit and resulting in the production of electrical energy.

2. (Original) The process of Claim 1 wherein said greenhouse gas stream is carbon dioxide.

3. (Original) The process of Claim 1 is used as in a waste-to-energy fossil fuel plant.

4. (Original) The process of Claim 1 is used in a petroleum refinery.

5. (Original) The process of Claim 1 is used in a petrochemical plant.

6. (Currently amended) The process of Claim 1 wherein said ~~gasification unit contains a rotary~~ kiln is indirectly heated over its entire length.

7. (Original) The process of Claim 1 wherein a portion of said synthesis gas from said gasification unit is converted in a chemical reactor into useful hydrocarbon products.

8. (Original) The process of Claim 7 wherein said chemical reactor is a Fischer-Tropsch reactor.

9. (Original) The process of Claim 1 wherein a major portion of the water is condensed from said first half-cell exit gas using a condenser.

10. (Original) The process of Claim 9 wherein CO2 and at least a portion of the condensed water is passed to said gasification unit in an amount to adjust the hydrogen to carbon ratio of the combined carbonaceous feedstock and greenhouse gas stream is sufficient to result in a synthesis gas having an optimum ratio for the Fischer-Tropsch reactor.

11. (Original) The process of Claim 10 wherein said synthesis gas has a hydrogen to carbon ratio in the range of about 1.75 to about 2.5.

12. (Original) The process of Claim 1 wherein the amount of greenhouse gas stream is adjusted in step (a) so that the combined carbonaceous feedstock and greenhouse gas stream to said gasification unit has a hydrogen to carbon monoxide ratio in the range of about ~~1.75~~ 1.2 to about 2.5.

13. (Original) The process of Claim 1 wherein the oxygen-containing gas in step (d) is air and the nitrogen portion as a result of the electrical reduction is exited into the atmosphere.

14. (Original) The process of Claim 1 wherein said first half-cell of said fuel cell contains an electrolyte surrounding a porous catalytic anode electrode.

15. (Original) The process of Claim 14 wherein said second half-cell of said fuel cell contains an electronically conducting electrolyte surrounding a catalytic cathode electrode.

16. (Original) The process of Claim 15 wherein said first and second half-cells of said fuel cell are separated by an ionically conducting membrane that will not allow passage of components from the respective half-cells.

17. (Canceled).

18. (Canceled)

19. (Canceled)

20. (Canceled)

21. (Canceled)

22. (Canceled)

23. (Canceled)

24. (Canceled)

25. (Canceled)

26. (Canceled)

27. (Canceled)

28. (Canceled)

29. (Canceled

30. (Canceled)

31. (Canceled)

32. (New) A process for converting carbonaceous feedstocks into energy without the production of unwanted greenhouse gas emissions comprising:

(a) converting a carbonaceous feedstock selected from the group consisting of coal, hydrocarbon oil, natural gas, petroleum coke, oil shale, carbonaceous-containing waste oil, carbonaceous-containing medical waste, carbonaceous-containing military waste, carbonaceous-containing industrial waste, carbonaceous-containing medical waste, carbonaceous-containing sewage sludge and municipal solid waste, carbonaceous-containing agricultural waste, carbonaceous-containing biomass, biological and biochemical waste, and mixtures thereof, and a greenhouse gas stream in a gasification unit to synthesis gas comprising carbon monoxide and hydrogen, said gasification unit is a non-catalytic high temperature, gas-phase, indirectly heated kiln having an inlet means, a gas outlet means, and a solids outlet between the inlet means and the gas outlet means operating at a temperature gradient along the length of the kiln of about 200° to about 1600°C (400-2900°F) and at conditions to achieve a gas exit temperature of from at least 700° to about 1600°C (1300-2900°F);

(b) electrochemically oxidizing at least a portion of said synthesis gas from said gasification unit in a first half-cell of a fuel cell (anode) to a first half-cell exit gas comprising carbon dioxide and water; and

(c) electrochemically reducing an oxygen-containing gas in a second half-cell of said fuel cell (cathode) completing the circuit and resulting in the production of electrical energy.

33. (New) The process of Claim 32 wherein said greenhouse gas stream is carbon dioxide.

34. (New) The process of Claim 32 wherein said greenhouse gas stream is methane.

35. (New) The process of Claim 32 wherein a portion of said synthesis gas from said gasification unit is converted in a chemical reactor into useful hydrocarbon products.

36. (New) The process of Claim 35 wherein said chemical reactor is a Fischer-Tropsch reactor.

37 (New) The process of Claim 32 wherein a major portion of the water is condensed from said first half-cell exit gas using a condenser.

38. (New) The process of Claim 37 wherein CO_2 and at least a portion of the condensed water is passed to said gasification unit in an amount to adjust the hydrogen to carbon ratio of the combined carbonaceous feedstock and greenhouse gas stream is sufficient to result in a synthesis gas having an optimum ratio for the Fischer-Tropsch reactor.

39. (New) The process of Claim 32 wherein the amount of greenhouse gas stream is adjusted in step (a) so that the combined carbonaceous feedstock and greenhouse gas stream to said gasification unit has a hydrogen to carbon monoxide ratio in the range of about 1.2 to about 2.5.

40. (New) The process of Claim 32 wherein the oxygen-containing gas in step (c) is air and the nitrogen portion as a result of the electrical reduction is exited into the atmosphere.